

**IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION**

OLLIE GREENE, *et al.*,

Plaintiffs

v.

TOYOTA MOTOR CORPORATION, *et al.*,

Defendants.

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CAUSE NUMBER: 3:11-cv-0207-N

**BRIEF IN SUPPORT OF TOYOTA'S MOTION TO EXCLUDE THE TESTIMONY OF
PLAINTIFFS' EXPERT DR. RHOADS STEPHENSON**

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TO THE HONORABLE COURT:

Defendants Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., and Toyota Motor Sales, U.S.A., Inc. (collectively "Toyota Defendants") file this Brief in Support of their Motion to Exclude the Testimony of Plaintiffs' Expert Dr. Rhoads Stephenson as follows:

I. INTRODUCTION

Plaintiffs designated Dr. Rhoads Stephenson ("Stephenson") to offer opinions regarding the design of the 2010 Toyota 4Runner's structure and fuel system and the cause and origin of the fire resulting from the subject accident, but Stephenson's testimony must be excluded at trial for a number of reasons. First, Stephenson lacks the necessary background, training, education, and experience to render expert opinion testimony regarding the design of the 4Runner. Second, Stephenson's opinion testimony is unreliable because it is not supported by relevant, reliable testing or a correct understanding or sound analysis of the subject accident. Federal and Texas case law is clear that unless an engineering opinion is supported by valid testing, it is not reliable. Third, Stephenson's opinions are not based on objective underlying data. Finally, there is too great of an "analytical gap" between the data Stephenson has considered and his final opinions in this case. More specifically, Stephenson opines as to various purported defects, but cannot state to a reasonable degree of engineering probability that any of these defects caused or contributed to the injuries and deaths in this case, or that his vaguely described safer alternative designs would have changed the outcome of the subject accident had they been implemented. Therefore, Stephenson's testimony regarding the design of the 4Runner's structure and fuel system, and the cause and origin of the fire is unreliable and must be excluded at trial.

II. FACTUAL AND PROCEDURAL BACKGROUND

This case arises out of a high speed, multiple-vehicle accident that occurred on May 28, 2010 in Kaufman County, Texas. Plaintiffs' decedents (collectively the "Greene Family") were traveling in a 2010 4Runner that was struck from behind by a 2008 Volvo tractor driven by Charles Moody. The force of the impact drove the 4Runner into the rear of a 2006 Corolla and then into the rear of the subject Strick Trailer. The Volvo tractor again impacted the rear and left side of the 4Runner, crushing it against and underneath the Strick trailer. Tragically, Lakeysa Greene, Wyndell Greene, II and Wesleigh Greene were killed at the scene by blunt force trauma and Wyndell Greene, Sr., died three months later. With respect to the Toyota Defendants, Plaintiffs allege strict products liability causes of action based on the design, manufacture, and marketing of the 4Runner. Specifically, Plaintiffs allege that the 4Runner was defective because its structure and fuel system did not properly protect the Greene Family during the subject accident, and ultimately caused their injuries and deaths.¹

To support their allegations against the Toyota Defendants, Plaintiffs designated Stephenson to testify regarding the design of the structure and fuel system of the 4Runner, and the cause and origin of the fire that resulted from the accident. *See* Notice of Service of Plaintiffs' Rule 26(a)(2) Expert Disclosures, Doc. No. 244; *see also* Preliminary Crashworthiness and Fireworthiness Report Relating to the Toyota Defendants; attached herein as Exhibit A; Excerpts from the Deposition Transcript of Dr. Rhoads Stephenson, attached herein as Exhibit B.

In his expert report, Stephenson provided a laundry list of defect allegations relating to the 4Runner, including the structure, fuel system, airbag system, and restraints system. However, when asked under oath during his deposition which defect theories he intends to testify

¹ Plaintiffs' Complaint also includes a host of other alleged defect claims, including allegations relating to the restraint system in the 4Runner. However none of these claims are supported by any of their experts.

on at trial, Stephenson stated that he intends to offer opinions relating to the cause and origin of the fire in the accident and the design of the 4Runner's fuel system. Specifically, Stephenson opines that the fuel system should have been protected by a full tank shield, that the 4Runner utilized an improper check valve on the filler tube connected to the fuel tank, and that the fuel injection system contained an unnecessary return line. Exhibit B, at 209:2-17; 212:13-24; 214:1-7.; App. 101-03. Stephenson also claims that the fuel tank size and location was improper, and that location of the rear strap on the fuel tank could have been better located. *Id.* at 214:22—215:9; 220:19-25; App. 103-04, 106.

During his deposition, Stephenson also offered limited opinions regarding the body structure and frame of the 4Runner. Stephenson claims that the rear of the structure could have been designed in a way to better absorb more energy in a rear impact. *Id.* at 221:23—222:10; App. 107-08. Stephenson also questioned whether the spare tire on the rear of the 4Runner was a necessary component. *Id.* at 222:11-18; App. 108. However, as discussed more fully below, Stephenson is not properly qualified to offer such vague and conclusory opinions.

In addition to the defect allegations above, Stephenson intends to testify at trial that "safer" alternative designs relating to his alleged fuel system design defects would have prevented the injuries and deaths of the Greene Family. However, because Stephenson has no testing to support these opinions, because he does not rely on objective underlying data, and because there is an analytical gap between the information that he relies upon and his final opinions, his testimony must be excluded.

III. ARGUMENT

A. Only Expert Witnesses Who Are Actually Qualified in the Relevant Field Are Allowed to Offer Expert Opinion Testimony at Trial.

Stephenson must not be allowed to offer opinions regarding the design of the 4Runner because he is not qualified to do so. Stephenson is not an automotive design expert, and he is not an expert on the structure of vehicles. The Fifth Circuit has held that while a trial court is afforded wide latitude in determining the admissibility of expert's testimony, it should not allow an expert to testify if it finds that the witness is not qualified to testify on a particular field or a given subject. *Wilson v. Woods*, 163 F.3d 935, 936-937 (5th Cir. 1999). To decide whether a proffered expert is truly qualified, courts must examine the expert's academic and professional background and, when appropriate, the expert's hands-on experience with the product at issue. In *Wilson*, the trial court examined the qualifications of the plaintiff's accident reconstruction expert. Despite the proffered expert's bachelor's and master's degrees in mechanical engineering, as well as his teaching experience in mechanical and industrial engineering, the district court refused to qualify the witness, holding that an engineering degree by itself was insufficient to qualify the witness as an expert:

Here, we don't have simple physics questions. If we did, then anyone that has any background in physics and mathematics, which any engineering graduate of any university in the country would have, is capable looking at whatever tables the government publishes and thereby become an expert.

Id. at 938. Instead, the Fifth Circuit focused on "significant deficiencies in [the witness's] experience and professional training" and affirmed the trial court's exclusion of the proffered expert. *Id.* at 938.²

² See also *Tokio Marine & Fire Ins. Co. v. Groove Mfg. Co.*, 958 F.2d 1169, 1174 (1st Cir. 1992) (excluding purported crane expert who had some experience in crane accident investigation, but had no actual experience in the design or manufacture of cranes) ("[The expert's] opinion on whether or not the absence of a load moment indicator was a "defect" called, in essence, for meaningful cost benefit analysis. This required, in turn, considerable familiarity with the device itself; with how hydraulic cranes work and are operated; with crane design, manufacture and marketing; with applicable industry standards; and so on."); *Poulan v. Beaird-Poulan*, 483 F.Supp. 1256 (W.D. La. 1980) (excluding testimony of mechanical engineer regarding chainsaws because purported expert had only limited experience with chainsaws).

Texas case precedent is also instructive on this issue. A purported expert must be qualified to offer opinion testimony before he is permitted to testify at trial. Texas Rule of Evidence 702 states, “If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.” It has long been recognized that a person is not qualified merely because he holds a college degree or has knowledge in the general area of expertise at issue. For example, the Texas Supreme Court has specifically held that a person’s education and training as an engineer does not automatically qualify him to testify as an expert on all technical issues or in every products liability case. *Gammill v. Jack Williams Chevrolet, Inc.*, 972 S.W.2d 713, 719 (Tex. 1998).³ Rather, an expert must have a specific expertise and **“further show special knowledge as to the very question upon which he proposed to express his opinion.”** *Broders v. Heise*, 924 S.W.2d 148, 153 (Tex. 1996) (emphasis added); *see also Hutchins v. Humble Oil and Ref. Co.*, 161 S.W.2d 571 (Tex. Civ. App.—Galveston 1942).

In *Broders*, the Texas Supreme Court held that a trial court properly excluded the testimony of an emergency room doctor concerning a patient’s cause of death. *Id.* at 148. The court held the proffered expert was not qualified to testify on cause of death issues merely because he had a medical degree, and emphasized that a trial court must ensure **“those who purport to be experts truly have expertise concerning the actual subject about which they are offering an opinion.”** *Id.* at 151-152 (emphasis added). The Court went on to hold:

What is required is that the offering party establish that the expert has “knowledge, skill, experience, training, or education” regarding the **specific issue**

³ Relying on *Broders v. Heise*, the *Gammill* Court specifically stated that “[j]ust as not every physician is qualified to testify as an expert in every medical malpractice case, not every mechanical engineer is qualified to testify as an expert in every products liability case.”

before the court which would qualify the expert to give an opinion on **that particular subject**.

Id. at 153 (emphasis added).

In *Gammill*, an automotive products liability case, the Texas Supreme Court determined the trial court correctly excluded the plaintiff's defect expert because he lacked expertise specifically related to the alleged defective components. 972 S.W.2d at 719. The plaintiff in *Gammill* claimed the accelerator pedal on her vehicle became caught in a wiring harness beneath the dashboard, which caused her to have an accident; she also claimed the restraint system on the vehicle was defective. *Id.* The plaintiff offered David Lowry as a liability expert to address the alleged defects in the vehicle's accelerator and restraint system. *Id.* at 717. Lowry had a Master's Degree in mechanical engineering with a significant background in testing and designing fighter planes and missiles, as well as some background in automotive repair. *Id.* Despite Lowry's engineering, testing, and automotive repair background, the trial court found he did not have any specialized expertise related to the design of automobile accelerators or restraint systems and excluded his testimony. *Id.* at 718-19. Specifically relying on its opinion in *Broders*, the Texas Supreme Court affirmed the trial court's exclusion of Lowry because he did not have any training or experience related to the specific defective component and specific defect allegations (i.e., the allegedly defective accelerator pedal and restraint system).

Here, Stephenson does not have the necessary background, education, training, or experience in automotive design. Stephenson has never been an automobile engineer and has never been involved in the design of passenger cars or light trucks. Simply put, Stephenson's background does not indicate that he has relevant background or experience regarding vehicle design. The case law is clear that "knowledge, skill, experience, training, or education regarding the **specific issue** before the court" is necessary to qualify an expert. *Broders*, 924 S.W.2d at

153 (emphasis added). Here, the specific issue on which Stephenson purports to opine is a design defect for the 4Runner's structure, but with no relevant engineering knowledge or experience, Stephenson is not qualified to offer these opinions. *See* Exhibit A, at 79-80; App. 79-80 (Stephenson's only automotive experience was a brief position at the National Highway Traffic Safety Administration). Stephenson did not even articulate an alternative design regarding the structure of the 4Runner. Instead he provided vague and conclusory statements that the rear structure "could have been done better." *See* Exhibit B, at 222:2-3; App. 108.

Similarly, his litigation consulting work alone is insufficient to qualify him as an expert. Experience in litigation or as a "professional expert" does not give someone the requisite background to qualify as an actual expert. *See e.g., Thomas J. Klein, Inc. v. Lorilord*, 878 F.2d 791, 800 (4th Cir. 1989), *cert. denied*, 493 U.S. 1073 (1990) ("It would be absurd to conclude that one can become an expert simply by accumulating experience in testifying."). Stephenson's lack of background, training, education, and experience regarding automotive design renders him unqualified to provide expert opinion testimony in this case.

B. Stephenson's Opinions Regarding the 4Runner's Fuel System Are Unreliable and Should be Excluded.

1. Standards of reliability for expert testimony.

Before he can offer expert opinion testimony at trial, the Court must also determine if Stephenson's opinions are reliable. *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579 (1993). Faced with an objection to a proffer of expert testimony, the Court must engage in a "preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid." *Id.* at 592-93. Baseless, unreliable evidence is of no assistance to the trier of fact and is thus inadmissible. *See, e.g., Viterbo v. Dow Chem. Co.*, 826 F.2d 420, 421 (5th Cir. 1987) ("If an opinion is fundamentally unsupported, then it offers no expert assistance to the jury."). A

witness who has “little more than his credentials and a subjective opinion” cannot provide expert testimony. *Id.* at 421-22; *see also Rosen v. Ciba-Geigy Corp.*, 78 F.3d 316, 319 (7th Cir. 1996) (“An expert who supplies nothing but a bottom line supplies nothing of value to the judicial process.”). The reliability determination is made by examining whether Stephenson arrived at his opinions by a reliable, scientific methodology similar to that utilized by persons outside the context of litigation. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999). Under this analysis, expert testimony is unreliable if it is not grounded “in the methods and procedures of science” and is no more than “subjective belief or unsupported speculation.” *Daubert*, 509 U.S. at 590. An expert’s bald assertions of validity are not enough. *See Daubert*, 509 U.S. at 590; *Viterbo*, 826 F.2d at 421. There must be objective, independent validation of the expert’s methodology. *See id.* In making this threshold reliability determination, the trial court may consider:

- 1) whether the theory has been reliably tested;
- 2) whether the theory has been generally accepted within the pertinent technical community;
- 3) whether the theory has been subjected to peer review; and
- 4) the known potential rate of error

Daubert, 509 U.S. at 593-94. The burden is on the proponent of the expert testimony to demonstrate the expert witness has adhered to the standards set forth in *Daubert*. *See Moore v. Ashland Chem., Inc.*, 151 F.3d 269, 276 (5th Cir. 1998).

2. Stephenson has no reliable testing to show that his supposedly "safer" alternative designs would have performed differently during the subject accident.

Stephenson's opinions regarding alternative designs are unreliable because he has no testing to support them. Valid testing and research is critical to establishing the reliability of opinions within the context of product liability cases. *See Watkins v. Telsmith, Inc.*, 121 F.3d 984, 991-93 (5th Cir. 1997) (affirming the exclusion of an expert who had not tested or reviewed

any testing of his proposed safer alternative design); *Tassin v. Sears, Roebuck and Co.*, 946 F. Supp. 1241, 1250 (M.D. La. 1996) (same); *Pride v. BIC Corp.*, 218 F.3d 566, 578 (6th Cir. 2000) (excluding opinion testimony where the experts failed “to test their hypotheses in a ... reliable manner”); *Berry v. Crown Equip. Corp.*, 108 F. Supp. 2d 743, 754 (E.D. Mich. 2000) (“[W]here, as here, the proffered expert has performed no reliable testing of this theory, courts ... have routinely precluded the witness from offering an expert opinion”).⁴

Here, Stephenson has not conducted any relevant, reliable testing to support his opinions that the 4Runner's fuel system was defectively designed and that a different fuel system design would have prevented the injuries and deaths of the Greene Family. During his deposition, Stephenson testified that there were various "safer" alternative designs the Toyota Defendants could have utilized that would have resulted in a safer fuel system. Stephenson states the fuel tank should have had a full length tank shield and that the fuel injection system contained an unnecessary return line. Exhibit B, at 209:2-17; 214:1-7; App. 101, 103. Stephenson also claims the fuel tank did not have the appropriate leak prevention technologies, that the size and location of the fuel tank should have been different, and that the location of the rear strap on the fuel tank could have been better located. *Id.* at 212:13-24; 214:22—215:9; 220:19-25; App. 102-04, 106. During his deposition, Stephenson was repeatedly asked whether he conducted any testing relating to the fuel system, including whether he tested any of these proposed alternative designs.

Q: With respect to all of your comments with regard to the design of the fuel system, whether it be tank shield, openings in the top, tank strap, placement --

A: Location.

⁴ See also *Rosado v. C.J. Deters*, 5 F.3d 119, 124 (5th Cir. 1993) (holding an accident reconstruction expert was properly excluded where “he could not independently establish the necessary physical and mathematical bases for his opinion”); *Oddi v. Ford Motor Co.*, 234 F.3d 136, 158 (3d Cir. 2000) (“Since [the expert] conducted no tests...he used little, if any, methodology beyond his own intuition. There is nothing here to submit to peer review, and it is impossible to ascertain any rate of error for [his] assumptions...”).

Q: -- location, capacity, have you done any testing to determine whether any alternative design that you might propose would have changed the outcome of this accident?

MR. PITTMAN: Objection, form.

A: I mean, it's clear that there are many element designs. You could have had a design that had three openings on the top instead of five. You could have had a system without a return line. You could have had a different way of supporting the tank than the strap. You could have had a full shield. Those are all -- or you could have a smaller volume of the gasoline tank and have it shorter. All those are design alternatives that are obvious.

Q: But you've done no testing to demonstrate that any one of those or even all of those combined changes would have changed the outcome of this accident?

MR. PITTMAN: Objection, form.

A: Well, you don't need testing to know that any of those would improve it.

Q: What I'm primarily concerned with is whether or not you did any virtual crash testing even relative to the Toyota fuel system, which would implicate anything associated with its impact into the Strick trailer.

A: No.

Q: That's all right. Have you done any testing or analysis to see what the consequences would be if the fuel tank was moved further forward; for instance, in a different type of accident?

A: I haven't personally.

Q: Have you done any testing as to what degree of protection a full length metallic tank shield would have provided in this accident, if any?

A: No, we have not done any testing.

Exhibit B, at 232:22—233:23; 63:13-18; 219:22—220:2; 302:16-19; App. 109-10, 94, 105-06, 113 (emphasis added). The record is clear that Stephenson has conducted no testing relating to the fuel system of the 4Runner and whether his proposed alternative designs would have prevented the injuries and deaths of the Greene Family. Stephenson has even acknowledged that if alternative designs are incorporated, both physical and virtual crash testing must be conducted to analyze the vehicle's safety as a whole in light of the new design changes.

Q: All right. And if you make a change to address an issue that may relate only to rear crashes, for instance, move the fuel tank forward and more to the side, you may reduce that vehicle's safety in a side crash or a frontal crash?

A: As we talked earlier, one has to take a systems approach and treat the whole vehicle as a system. And so you have to look at --

Q: All those factors?

A: -- all the different crash modes when you're designing a vehicle, yes.

Q: And one would need to do testing, including crash testing?

MR. PITTMAN: Objection, form.

A: And virtual crash testing, yes.

Exhibit B, at 299:21—300:11; App. 111-12.

Whether an expert's theory or conclusion can be and has been tested has been described as the "most significant *Daubert* factor," and numerous cases have held that the failure to subject an expert's proffered opinion to scientific testing justifies exclusion. *See, e.g., Cummins v. Lyle Indus.*, 93 F.3d 362, 368 (7th Cir. 1996); *Brooks v. Outboard Marine Corp.*, 234 F.3d 89, 92 (2d Cir. 2000); *Garcia v. BRK Brands, Inc.*, 266 F. Supp. 2d 566, 574 (S.D. Tex. 2003). As the Seventh Circuit noted, even a "supremely qualified expert cannot waltz into the courtroom and render opinions unless those opinions are based upon some recognized scientific method." *Clark*

v. Takata Corp., 192 F.3d 750, 759 n.5 (7th Cir. 1999); *see also Rosado v. C.J. Deters*, 5 F.3d 119, 124 (5th Cir. 1993) (holding an accident reconstruction expert was properly excluded where “he could not independently establish the necessary physical and mathematical bases for his opinion”); *Garcia*, 266 F. Supp. 2d at 577 (holding experts were properly excluded where they “have not convincingly demonstrated, nor even sought to demonstrate, that their conclusions [were not] untested hypotheses”).

Without some sort of reliable testing or other analysis, Stephenson cannot possibly opine that the 4Runner's fuel system was unreasonably dangerous and defective. Stephenson cannot offer the jury or this Court a shred of empirical evidence that the 4Runner's fuel system would have prevented the injuries and deaths of the Greene Family if the Toyota Defendants had implemented any of Stephenson's proposed alternative designs. His speculative opinions cannot be of assistance to the jury and must be excluded under *Daubert*.

3. Stephenson's *ipse dixit* opinions should be excluded.

An expert's opinions must be supported by data; his bare opinion will not suffice. *Merrell Dow Pharms., Inc. v. Havner*, 953 S.W.2d 706, 712 (Tex. 1997); *Burroughs Welcome Co. v. Crye*, 907 S.W.2d 497, 499-500 (Tex. 1995); *Schaefer v. Tex. Employers' Ins. Ass'n*, 612 S.W.2d 199, 202-04 (Tex. 1980). “Experts cannot float their conclusions on cushions of air; they must rest those conclusions upon foundations built from reliable scientific explanation.” *Navarro v. Fuji Heavy Indus., Ltd.*, 925 F. Supp. 1323, 1328 (N.D. Ill. 1996), *aff'd*, 117 F.3d 1027 (7th Cir.), *cert. denied*, 1185 S.Ct. 600 (1997).

Courts have dismissed the *ipse dixit* rule: It is so simply because “an expert says it is so.” *See Viterbo*, 826 F.2d at 421; *Havner*, 953 S.W.2d at 712. Scientific knowledge requires more than guesswork, it must be grounded in a body of known facts or a body of ideas inferred from

such facts; otherwise, reliability is lost and the trier of fact is not assisted by what may be no more than speculation or subjective belief. *U.S. v. Posado*, 57 F.3d 428, 433 (5th Cir. 1995); *Claar v. Burlington N. R.R. Co.*, 29 F.3d 499 (9th Cir. 1994); *Robinson*, 923 S.W.2d at 556; *Onweuteaka v. Gill*, 908 S.W.2d 276, 283 (Tex. App.—Houston [1st Dist.] 1995, no writ).

Furthermore, “an expert who is trying to find a cause of something should carefully consider alternative causes. Failure to rule out other causes renders the expert’s opinion little more than speculation.” *Gammill*, 983 S.W.2d at 7 (citing *Robinson*, 923 S.W.2d at 559). An expert’s opinions must be made to a reasonable degree of scientific probability, or else they are no evidence at all. *Brookshire Bros., Inc. v. Smith*, 176 S.W.3d 30, 37 (Tex. App.—Houston [1st Dist.] 2004, pet. denied) (citing *Havner*, 953 S.W.2d at 712) (holding a reasonable degree of scientific certainty is “more probable than not.”). An expert’s opinion that a defendant’s alleged action is “consistent” with the injuries suffered by the plaintiff “does not demonstrate a causal connection,” and will not support a verdict. *Walgreen Co. v. Hieger*, 243 S.W.3d 183, 186 (Tex. App.—Houston [14th Dist.] 2007, pet. denied).

In this case, Stephenson's opinions are not based on any objective underlying data. There is no physical evidence indicating where, when, or how the alleged fuel tank leak resulted in the fire. For example, Stephenson could not identify any physical evidence of fuel or fire on the roadway where the initial impact occurred between the Volvo tractor and the 4Runner:

Q: Okay. And let me refine my question because there clearly were scratches on the -- on the road. But is there any direct evidence of -- physical evidence of fuel or fire on the roadway associated with the initial impact with the Volvo truck?

A: No, not to my knowledge. But that doesn't mean that there wasn't a leak. That's, in my opinion, where the leak started.

Exhibit B, at 232:14-21; App. 109. Without any evidentiary support, Stephenson's purported opinions amount to nothing more than "conclusions on cushions or air," rather than based on reliable science. His *ipse dixit* opinions should be excluded.

Stephenson also failed to consider other possible causes. For example, Stephenson did not fully consider whether the fuel system was breached after the initial impact between the Volvo tractor and the 4Runner, or later in the series of sever impacts in the accident when the 4Runner was crushed against and underneath the Strick trailer. During his deposition, Stephenson even discussed the importance of considering the entire accident sequence when assessing the performance of a vehicle in a crash scenario:

Q: Would you agree that if one is going to assess the performance of a vehicle in a crash, he should be familiar with the entire accident sequence of that accident crash or crashes?

MR. PITTMAN: Objection, form.

A: Well, as I said at the beginning, my focus is on the fire aspects of this crash and Mr. Friedman was handling the mechanical crash dynamics of the crash, and we have got the reconstruction experts that are looking at the trajectories of all of the vehicles. And so I -- certainly it's important to look at everything, but I think I understand what caused the fire.

Exhibit B, at 309:15—310:2; App. 115-16. As part of his analysis, Stephenson relied upon the Plaintiffs' accident reconstructionist, Jeff G. Vick, in determining the crash scenario. *See id.* at 167:11—168:19; App. 97-98. Yet, Vick's reconstruction of the crash is fatally flawed because he failed to consider that the Volvo tractor struck the rear and side of the 4Runner in a subsequent impact. *See Motion to Exclude the Testimony of Plaintiffs' Expert Jeff G. Vick*, Doc. No. 436, 438. Stephenson, following Vick's reconstruction, failed to properly consider whether the fuel leak could have occurred during the subsequent impacts because his focus was solely on the initial impact:

Q: If I understand you, you said you're more concerned with essentially Impact 1, the first impact of the Volvo into the back of the 4Runner, correct?

MR. PITTMAN: Objection, form.

A: Yes, because that's where I think the -- the tank developed its leak.

Q: All right. And the subsequent impacts that occurred during the crash are -- have not been something you've considered in detail because you believe that the fuel tank was breached in the Impact 1. Is that fair?

MR. PITTMAN: Objection, form.

A: I've said twice this morning that I don't think the -- the impact of the 4Runner and the Corolla damaged the tank, and I -- and I don't think that the 4Runner hitting the rear of the Strick trailer damaged the tank. And so since I'm the fire guy and I'm interested in the gasoline leak, those all happened before that time, and I'll let the other four reconstruction experts try to explain this damage. I -- it's -- I --

Q: All right. But it's fair to say that -- that the impact or engagement involving the -- later in the accident involving the Strick trailer and potentially the Volvo is not something you've considered in detail?

A: I certainly thought about it, but I don't think I'm the one to resolve it.

Exhibit B, at 176:18—177:20; App. 99-100. Although Stephenson knew that it was important to consider the entire accident sequence, he relied on Vick's flawed reconstruction and failed to consider whether the fuel system was breached in one of the later severe impacts. Stephenson does not understand the proper accident sequence and his analysis that the fuel system was breached in the initial impact is speculative and unreliable.

4. Stephenson's opinions suffer from an analytical gap and should be excluded.

Expert testimony is unreliable if the court concludes “there is simply too great an analytical gap between the data and the opinion proffered.” *Gen. Elec. Co. v. Joiner*, 522 U.S.

136, 146 (1997). In *General Electric Co. v. Joiner*, the United States Supreme Court held the district court did not abuse its discretion in excluding expert testimony on the basis that it was not supported by the underlying data on which the expert relied. *Id.* at 142. The data upon which an expert relies must be closely connected to his opinion:

[N]othing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence which is connected to existing data only by the *ipse dixit* of the expert. ***A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.***

Id. (emphasis added).

To be relevant, the proposed expert testimony must be sufficiently tied to the facts of the case such that it will aid the jury in resolving a factual dispute. *Robinson*, 923 S.W.2d at 556 (quoting *U.S. v. Downing*, 753 F.2d 1224, 1242 (3rd Cir. 1985)); see also *Volkswagen of Am., Inc. v. Ramirez*, 159 S.W.3d 897, 905 (Tex. 2004) (applying the “analytical gap” test to scientific testimony and excluding expert testimony because there was no explanation of how the data relied upon supported the conclusion reached). In other words, when the underlying data on which the expert relies does not actually support the expert’s opinions, those opinions are inherently unreliable.

Stephenson's causation opinions should be excluded because there is simply too great of an analytical gap between the data relied upon by Stephenson and his opinions. Stephenson claims the 4Runner's fuel system was defectively design in several respects, but he fails to link any to the fuel loss and fire. He claims to "know" that there was a fuel tank leak as a result of the initial impact between the Volvo tractor and the 4Runner, that the leak led to the fire that caused or contributed to the injuries and death of the Greene Family, and that his proposed alternative designs would have prevented this from occurring. However, Stephenson's conclusory defect and causation opinions are unreliable because he fails to identify how the fuel tank leak occurred,

when the fire began during the accident sequence, and whether or not his proposed alternative designs would have prevented the injuries and deaths of the Greene Family to a reasonable degree of engineering probability.

When repeatedly asked about the specific source of the fuel leak during his deposition, Stephenson states that there are multiple possibilities, but cannot identify where the leak occurred.

Q: So would it be a fair statement, Dr. Stephenson, that you cannot to an engineering degree of reasonable certainty say which of these points that you put on Page 19 and Paragraph 3 of your Toyota report, which of these is the actual cause of the leak of fuel?

MR. PITTMAN: Objection, form.

A: Yeah.

Q: Can you tell us more likely than not which of those five possibilities was the source of the leak in the fuel?

A: I cannot pick one of these. I think they're all possible, and any one of them that allows the fuel to get out of the tank would be enough to start -- get the -- get the fire going.

Exhibit B, at 49:11-22; 51:13-19; App. 92, 93. The record is clear that Stephenson is unable to identify the source of the alleged fuel leak in the 4Runner to a reasonable degree of engineering certainty.

In addition, Stephenson cannot identify when the alleged fuel leak occurred or when the fire started.

Q: Listen, it's just common sense that people do it that way. And what I'm curious about is that if you were to -- would it be a fair statement that it's equally probable that the fire could have started in the first collision between the Volvo and the Toyota or in the collision between the Toyota and the Strick trailer?

A: I can't say whether it's equally probable or not. I think it could have been 100 percent probable at either place.

Exhibit B, at 42:23—43:8; App. 90-91. Finally, and most importantly, Stephenson cannot state that his alternative designs would have prevented the injuries and deaths of the Greene Family.

Q: Now, with regard to the -- I think you described them as improvements that you thought could have been made to the Toyota fuel system. Taking into account the design qualification process that we just talked about, can you say, based upon a reasonable scientific probability, that any or all of those improvements that we talked about earlier in the deposition, had they been incorporated in the 4Runner would have prevented any fuel loss in this accident?

MR. PITTMAN: Objection, form.

A: I suspect we were kind of right at the edge between not having a fuel loss and having a fuel loss, and we obviously had a fuel loss. **So a few minor improvements might have made a big difference in the outcome.**

Q: Why do you say that we're right at the edge? Is that based on the Exponent test?

A: No, no. I just -- since we don't have the finite element model, we don't know the dynamics of all of the crush of the rear and the rebound that happened when the elastic energy was released and the 4Runner actually sort of springs ahead of the Volvo. But I suspect that if he had an inch or two, it might -- **it might not have had a leak.**

Q: May or may not have?

A: **May or may not have had a leak.**

Q: Doctor, based upon a reasonable scientific probability, would the tank shield have changed the outcome?

MR. PITTMAN: Objection, form.

A: It certainly could have. I don't know of the scientific probability, but --

Exhibit B, at 311:3—312:3; 303:20-25; App. 117-18, 114 (emphasis added). Instead of specifically identifying how one of his proposed alternative designs would have prevented the injuries and deaths of the Greene Family, he simply opines that the fuel system in the 4Runner could have been improved. His opinions fail to provide the evidentiary support Plaintiffs must have to establish the requisite elements of their cause of action that the design of the fuel system was unreasonably dangerous and that such alleged defects were a producing cause of the injuries and deaths of the Greene Family. To the contrary, Stephenson assumes, correctly so, that the 2010 4Runner exceeded the requirements of the applicable fuel system integrity standard (FMVSS 310) but observes that improvement "could have" been made and that "...it might have made a difference in this crash, for example."

Q: Okay. And did the 2010 4Runner, the subject 4Runner, which under your assumption complied with all applicable Federal Motor Vehicle Safety Standards, provide the American motoring public with a reasonable level of safety?

MR. PITTMAN: Objection, form.

A: I mean, it could have been higher and it could have been protected -- in excess of 301 for rear impacts, it might have made a difference in this crash, for example. You can always do better than the—all of these standards that NHTSA puts out are considered minimum standards and many manufacturers do exceed those requirements with their internal requirements.

Q: And you're aware that Toyota actually runs its 301 test at a speed higher than that required by the government?

MR. PITTMAN: Objection, form.

A: I believe you run it at 55, and I believe you require zero leakage.

Q: And do you -- that's a good thing, in your mind, isn't it?

A: Correct.

MR. PITTMAN: Objection, form.

A: Yeah, I think that -- it's good to exceed the standard.

Exhibit B, at 155:12—156:12; App. 95-96. Stephenson's complete failure to identify how any one of his proposed alternative designs would have prevented the injuries and death of the Greene Family speaks directly to the speculative and conclusory nature of his opinions. Because Stephenson cannot opine to a reasonable degree of scientific probability that any of his proposed alternative designs would have made a difference, his opinions are unreliable and suffer from an analytical gap—the premises do not support the conclusion—and Stephenson's opinions should therefore be excluded.

IV. CONCLUSION

WHEREFORE, PREMISES CONSIDERED, Defendants Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., and Toyota Motor Sales, U.S.A., Inc. respectfully request that their Motion to Exclude the Testimony of Plaintiffs' Expert Dr. Rhoads Stephenson be granted in its entirety; that Stephenson not be allowed to offer any testimony at the trial of this matter regarding the aforementioned topics; and for such further relief, both at law or in equity, to which Toyota may show itself to be justly entitled.

Respectfully submitted,

/s/ Kurt C. Kern

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document has been forwarded to all known counsel of record in this cause in accordance with the Federal Rules of Civil Procedure on this 17th day of March, 2014.

/s/ Jude T. Hickland